



Application No.: 10/605,638
Docket No. 23634-0001-U1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: RAHMAN, Anis) Group Art Unit: 2633
Application No.: 10/605,638) Examiner: KIANNI, Kaveh C.
Filed: October 15, 2003) Atty. Docket No. 23634-0001-U1
For: REFLECTIVE ARRAYED WAVEGUIDE GRATING

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

SIR:

The following are included with this Information Disclosure Statement:

- ☒ **A. PTO/SB/08**
- ☐ **B. CERTIFICATION**
(37 C.F.R. 1.97(c)-before final Office Action or allowance)
- ☐ **C. \$180.00 FEE PAYMENT**
(37 C.F.R. 1.97(c)-before final Office Action or allowance)
- ☐ **D. \$180.00 PETITION, CERTIFICATION & PETITION FEE PAYMENT**
(37 C.F.R. 1.97(d)-before issue fee payment)

The following are submitted in the above-identified application in compliance with 37 CFR 1.98:

- ☐ **I. A copy of each listed U.S. Patent and U.S. Patent application publication [1.98(a)(2)(i)].**
- ☐ **II. A copy of each listed foreign patent and/or published foreign patent application. For each listed foreign patent and/or published foreign patent application [1.98(a)(2)]:**
- ☐ **a) the English language version or an English translation if not published in English, if available (see PTO-1449)[1.98(a)(3)]; and/or**

- ☐ b) U.S. counterpart patents or English language equivalents of the foreign patents or published foreign patent applications (see PTO-1449); and/or
- ☐ c) a concise explanation of the relevance of the listed patents, publications or other information (see PTO-1449, foreign search report or other, attached), as it is presently understood by the person signing this disclosure, since no English translation is currently available[1.98(a)(3)].
- ☒ **III.** A copy of each listed publication, other than published foreign applications. For each listed publication [1.98(a)(2)]:
 - ☒ (a) an English translation, if available, when the original publication is not in the English language (see PTO-1449)[1.98(a)(3)];
 - ☐ (b) a concise explanation of the listed publications (see PTO-1449), as it is presently understood by the person signing this disclosure, since no English translation is currently available [1.98(a)(3)].
- ☒ **IV.** For any other listed information, a copy of the information or that portion which caused it to be listed (see PTO-1449)[1.98(a)(2)(iii)].
- ☐ **V.** Each listed U.S. Patent, Publication or other information that was previously cited by or submitted to the Office in a prior application, which application is relied upon for an earlier filing date under 35 U.S.C. § 120 [1.98(d)].
- ☒ **VI.** Copies of each listed U.S. Patent and U.S. Patent application publication are not being submitted herewith pursuant to a waiver of 37 CFR 1.98(a)(2)(i) by the USPTO on July 11, 2003 for applications filed after June 30, 2003.

This information is submitted in the above-identified application in compliance with 37 C.F.R.1.97 because:

- ☒ **1.** This information disclosure is submitted within three months of the filing date of the application, or before the mailing date of the first office action on the merits of the application [1.97(b)].
- ☐ **2.** This information disclosure is submitted before the mailing date of a final action in this application under 1.113[1.97(c)] and the requisite statement or fee is provided (see items 6 or 7 below).

- ☐ 3. This information disclosure is submitted before the mailing date of a notice of allowance under 1.311 [1.97(c)] and the requisite statement or fee is provided (see items 6 or 7 below).
- ☐ 4. This information disclosure is submitted after the mailing date of a final action under 1.113 [1.97(d)] and the requisite statement and fee is provided (see items 6 and 8 below).
- ☐ 5. This information disclosure is submitted after the mailing date of a notice of allowance under 1.311, but before the payment of the issue fee [1.97(d)] and the requisite statement and fee is provided (see items 6 and 8 below).
- ☐ 6. This information disclosure statement is submitted with the statement required for items 2, 3, 4 or 5 above [1.97(c), (d), (e)]:
- ☐ **I, William P. Smith, hereby state the following:**
- ☐ **Each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.**
- ☐ **No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this information disclosure was known to any individual designated in 1.56(c) more than three months prior to the filing of this information disclosure statement.**
- ☐ 7. This information disclosure statement is submitted with the fee of \$180 set forth in 1.17(p) [see items 2 and 3 above]. Please charge this fee and any other fees associated with this application to Deposit Account No. 50-1059. (Please note, no fee is required for items 2 and 3 above if the Item 6 statement is provided).

Application No.: 10/605,638
Atty. Docket No. 23634-0001-U1

- ☐ 8. Please charge this fee and any other fees associated with this application to Deposit Account No. 50-1059.

Dated: June 14, 2005

Respectfully submitted,
McNees Wallace & Nurick LLC



William P. Smith
Reg. No. 34,931
100 Pine Street
P.O. Box 1166
Harrisburg, PA 17108-1166

Phone: (717) 237-5260
Fax: (717) 237-5300

PTO/SB/08a (08-03)

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)			Complete if Known		
			Application Number	10/605,638	
			Filing Date	October 15, 2003	
			First Named Inventor	RAHMAN, Anis	
			Art Unit	2633	
			Examiner Name	KIANNI, Kaveh C.	
Sheet	2	of	3	Attorney Docket Number	23634-0001-U1

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	1	K. OKAMOTO; "Fundamentals of Optical Waveguides, Ch. 9"; Academic Press, New York 2000.	
	2	K.M.A. RAHMAN, C.J. DURNING, N.J. TURRO and D.A. Tomalia; "Adsorption of Poly(amido amine) Dendrimers on Gold"; Langmuir 2000, volume 16; pages 10154 - 10160.	
	3	K.M. Anis RAHMAN, Christopher J. DURNING and Nicholas J. TURRO; "Molecular Dynamics of PAMAM Dendrimers"; http://dwdm2.home.comcast.net/p-amamdynamics.pdf .	
	4	Dendritic NanoTechnologies website at http://dnanotech.com/properties.html .	
	5	Akira OTOMO, Sonoko OTOMO, Shiyoshi YOKOYAMA, Tatuso NAKAHAMA, Shinro MASHIKO; "Remarkable optical properties of dendrimers for laser applications"; Linear and Nonlinear Optics of Organic Materials; Manfred EICH and Mark G. KUZYK - Editors; Proceedings of SPIE; volume 4461; pages 180 - 187; 2001.	
	6	Alex K. Y. JEN, Hong MA, Takafumi SASSA, Sen LIU, S. SURESH, Larry R. DALTON, and Mamie HALLER; "Highly efficient and thermally stabler organic/polymeric electro-optic materials by dendritic approach"; Linear and Nonlinear Optics of Organic Materials; Manfred EICH and Mark G. KUZYK - Editors; Proceedings of SPIE; volume 4461; pages 172 - 179; 2001.	
	7	Pr. Gero DECHER; "L'Interfacage Macromoleculaire: Nouveaux Matériaux par Nanoassemblage"; Conference du Mercredi; 12 Fevrier 2003.	
	8	Claire PITOIS, Robert VESTBERG, Marlene RODLERT, Eva MALMSTROM, Anders HULT, Mikael LINDGREN; "Flourinated dendritic polymers and dendrimers for waveguide applications"; Optical Materials; volume 21, pages 499 - 506; 2002.	
	9	Larry R. DALTON; "Polymeric and Dendritic Electro-Optic Materials: Materials Issue"; University of Washington; Seattle, Washington 98185-01700.	
	10	C. DRAGONE; "An NxN Optical Multiplexer Using a Planar Arrangement of Two Star Couplers"; IEEE Photonics Technology Letters; volume 3; number 9; pages 812 - 815; September 1991.	
	11	Y. INOUE, A. HIMENO, K. MORIWAKI, M. KAWACHI; "Silica-based arrayed-waveguide grating circuit as optical splitter/router"; Electronics Letters; volume 31; number 9; pages 726 - 727; April 27, 1995.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 3 of 3

Complete if Known

Application Number	10/605,638
Filing Date	October 15, 2003
First Named Inventor	RAHMAN, Anis
Art Unit	2633
Examiner Name	KIANNI, Kaveh C.
Attorney Docket Number	23634-0001-U1

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	12	H. BISSESSUR, B. MARTIN, R. MESTRIC, and F. GABORIT; "Small-size, polarization-independent phased-array demultiplexers on InP"; Electronics Letters; volume 31; number 24; pages 2118 – 2120; November 23, 1995.	
	13	T. BRENNER, C.H. JOYNER and M. ZIRNGIBL; "Compact design waveguide grating routers"; Electronics Letters; volume 32; number 18; pages 1660 – 1661; August 29, 1996	
	14	M. ZIRNGIBL, C.H. JOYNER AND J.C. CENTANNI; "Size reduction of waveguide grating router through folding back the input/output fanouts"; Electronics Letters, volume 33; number 4; pages 295 – 297; February 13, 1997.	
	15	Hideaki OKAYAMA, Masato KAWAHARA and Takeshi KAMIJOH; "Reflective Waveguide Array Demultiplexer in LiNbO ₃ "; Journal of Lightwave Technology; volume 14; number 6; pages 985 – 990; June 1996.	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.